

## Biologi dan Kemampuan Memangsa *Paederus fuscipes* Curtis (Coleoptera: Staphylinidae) terhadap *Bemisia tabaci* Gennadius (Homoptera: Aleyrodidae)

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### ABSTRACT

Biology and preying ability of *Paederus fuscipes* Curtis (Staphylinidae) on *Bemisia tabaci* Gennadius (Homoptera: Aleyrodidae)

*Bemisia tabaci* is one of the major in vegetable production and causes economic lost up to 100 %. It was reported that *Paederus fuscipes* is able to prey *B. tabaci* in vegetables field in Ciwidey, Bandung. The greenhouse studies were conducted to observe the biology of *P. fuscipes* and its adult male feeding ability on *B. tabaci*. The experiment was arranged in Completely Randomized Block Design with five treatments and five replications. The treatments were infesting 10, 20, 40, 80, and 160 nymphs of *B. tabaci* per one adult *P. fuscipes*. The result showed that the life cycle of *P. fuscipes* was 38–75 days. The egg stage was 4–7 days, the 1<sup>st</sup> instar larvae stage was 4–5 days, the 2<sup>nd</sup> instar larvae stage was 6–9 days, the pre-pupae stage was 2–3 days, the pupae stage was 3–5 days and the adult stage was 19–46 days. *P. fuscipes* responded functionally to the increase of *B. tabaci* nymph density. One adult of *P. fuscipes* was able to feed up to 101.1 nymph in the afternoon period and 100.1 in the morning period, or 0.83–8.17 nymphs per hour on the day and 0.75–8 nymphs per hour in the night.

Key words: *Bemisia tabaci*, *Paederus fuscipes*, Preying ability.

### ABSTRAK

*Bemisia tabaci* merupakan hama tanaman di beberapa sentra produksi sayuran hingga mengakibatkan kerugian ekonomi sampai 100 %. *Paederus fuscipes* merupakan predator *B. tabaci* pada beberapa tanaman di Kecamatan Ciwidey, Bandung. Penelitian bertujuan untuk mengetahui biologi dan kemampuan memangsa imago *P. fuscipes* jantan terhadap nimfa *B. tabaci*. Percobaan menggunakan Rancangan Acak Kelompok yang terdiri atas lima perlakuan dan 5 ulangan. Perlakuan terdiri atas: infestasi 10, 20, 40, 80, dan 160 nimfa *B. tabaci* per satu imago *P. Fuscipes*. Hasil pengamatan biologi menunjukkan bahwa siklus hidup *P. fuscipes* berkisar antara 38–75 hari. Fase telur berkisar 4–7 hari, larva instar-1 berkisar 4–5 hari, larva instar-2 berkisar 6–9 hari, pra-pupa berkisar 2–3 hari, pupa berkisar 3–5 hari, dan lama hidup imago berkisar 19–46 hari. *P. fuscipes* memperlihatkan tanggap fungsional terhadap peningkatan kepadatan *B. tabaci* sebagai mangsa. Jumlah pemangsaan nimfa *B. tabaci* tertinggi terjadi pada kepadatan 160 nimfa, yaitu 101,1 dan 100,1 nimfa *B. tabaci* per imago *P. fuscipes*, masing-masing untuk periode pagi dan sore. Kecepatan memangsa imago *P. fuscipes* terhadap nimfa *B. tabaci* yaitu berkisar 0,83–8,17 nimfa per jam pada siang hari, dan 0,75–8 nimfa per jam pada malam hari.

Kata kunci: *Bemisia tabaci*, *Paederus fuscipes*, Kemampuan memangsa.